

PCT/DE00/01980
1999P04110WO

- 9 -

Patent Claims

1. A method for carrying out the advancing movement of at least one tool ~~rest rotating about a support rotatable~~ ^{an} ~~the at least one tool~~ rotationally symmetric component, and ~~which is being actuated~~ capable of being fed in each case via a leadscrew, and ~~is supported on the component and is rotatably drivable~~ ^{was of} ~~driven in~~ rotation as a whole by a stationarily mounted main motor via a main transmission mechanism connected firmly to the support of the tool rest or tool rests, the advancing movement of each leadscrew being brought about in each case by the relative movement of a further motor-driven transmission mechanism cooperating with the leadscrew, in addition to the main transmission mechanism, and the relative movement generated by the drive in each case of a ^a ~~support~~ ^{being} rest motor mounted at a fixed location and driving the further transmission comprising mechanism, characterized in that the rest motor is synchronously driven in rotation as a whole, by the main motor with the aid of a mechanical coupling to the latter of the rest and main motors
2. The method as claimed in claim 1, characterized in that each rest motor is braked in the event of a feed of zero.
3. A feed device for a working machine for the surface machining of a rotationally symmetric component ^{comprising:} ¹, with a stationarily mounted main motor ⁽⁸⁾ and with a main transmission mechanism; for transmitting the drive movement from the main motor ⁽⁸⁾ to ¹ at least one tool rest ^{support} ⁽⁴⁾ which rotates about the component; ⁽¹⁾ and is capable of being fed on at least one leadscrew ⁽⁵⁾ and which is supported by means of a rest mounting ⁽³⁾ on ^{support} ^{for actuating the} ^{receiving} ^{drive} ^{movement from} ^{the main} ^{transmission} ^{mechanism} and ^{on the} ^{component,} ^{at least one tool} ^{support;}

PCT/DE00/01980
1999P04110WO

- 9a -

the component (1), each leadscrew (5)

PCT/DE00/01980
1999P04110WO

for supporting at least the at least one feed screw; and

- 10 -

~~being capable of being driven by a further transmission mechanism and the latter by a fixed rest motor (13), characterized in that the housing of the rest motor (13) is mounted rotatably and is coupled mechanically to the main motor, (8), and is thus capable of being driven synchronously in rotation by the latter.~~

L main motor

having a further transmission mechanism for driving at least one feed screw, 4.
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4. The feed device as claimed in claim 3,
wherein characterized in that the main transmission mechanism is an externally toothed gear ring (6) driven by a pinion (7) seated on the (a) motor shaft of the main motor (8).

15 5. The feed device as claimed in claim 3 or 4,
wherein characterized in that the main transmission mechanism is an externally toothed gear ring driven by the (a) motor shaft of the main motor via a toothed belt.

20 6. The feed device as claimed in one of claims 3 to 5, characterized in that the further transmission mechanism is an externally and internally toothed gear ring (12) driven by a pinion (11) seated on the motor shaft of the rest motor (13).
La

support

25 7. The feed device as claimed in one of claims 3 to 6, characterized in that the further transmission mechanism is an externally and internally toothed gear ring driven by the motor shaft of the rest motor via a toothed belt.
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claim 3, wherein

PCT/DE00/01980
1999P04110WO

- 11 -

claim 3, wherein the

8. The feed device as claimed in ~~one of claims 3 to 7, characterized in that each rest motor (13) is equipped with a slip ring set (15) for the transmission of power to its windings~~ *(thereof*
- 5 9. The feed device as claimed in ~~one of claims 3 to 8, characterized in that~~ the further transmission mechanism is mounted rotatably on a support ~~(10)~~ of the main motor ~~(8)~~. *claim 3, wherein*
- 10 10. The feed device as claimed in ~~one of claims 3 to 8, characterized in that~~ the further transmission mechanism is mounted rotatably on ~~the rest~~ *SUPPORT* mounting ~~(3)~~ of the tool rest ~~(4)~~. *La SUPPORT*
- 15 11. The feed device as claimed in ~~one of claims 3 to 10, characterized in that~~ the main motor ~~(8)~~ is coupled mechanically to ~~the~~ *Brake* housing of the ~~rest~~ *SUPPORT* motor ~~or rest motors (13)~~ via toothed belts ~~(14)~~. *claim 3, wherein*
- 20 12. The feed device as claimed in ~~one of claims 3 to 10, characterized in that~~ the main motor is coupled mechanically to the housing of the ~~rest~~ *SUPPORT* motor ~~or rest motors~~ via gearwheel mechanisms. *claim 3, wherein*
- 25 13. The feed device as claimed in ~~one of claims 3 to 12, characterized in that~~ the ~~rest~~ motor ~~(13)~~ is a brake motor. *claim 3, wherein SUPPORT*
14. same as 13, depending on 4 20. same as 12, depending on 4
- 15 " " " 5 4
16. " " " 6
- 17 " " " 7
- 18 same as 6, depending on 4
- 19 " " 7 " " 5

Reference symbols

- 1 Shaft
- 2 Bearing
- 3 Frame support
- 4 Tool rest
- 5 Leadscrew
- 6 Ring gear
- 7 Pinion
- 8 Main motor
- 9 Tool
- 10 Support
- 11 Pinion
- 12 Ring gear
- 13 Rest motor
- 14 Toothed belt
- 15 Slip rings

- 17 Pinion